

REMARKS

Formal Matters

Claims 31, 33-40 and 42-52 are pending after entry of the amendment set forth herein.

Claims 31-48 were examined. Claims 31-48 were rejected.

Claims 31 and 40 are amended and claims 49-52 are new. The amendments to the claims were made solely in the interest of expediting prosecution, and are not to be construed as an acquiescence to any objection or rejection of any claim. Support for the amendments and the new claims is found in the claims as originally filed, and throughout the specification, in particular at the following exemplary locations: page 12, lines 11-12, page 15, lines 10-14, Fig 3B. Accordingly, no new matter is added by these amendments.

Claims 1-30, 32 and 41 were cancelled.

Applicants respectfully request reconsideration of the application in view of the remarks made herein.

Rejections under 35 U.S.C. §112, second paragraph

Claims 32 and 41 are rejected under 35 U.S.C. §112, second paragraph, as indefinite because it is assertedly unclear how a biomolecule can have an exogenous portion because a molecule is a single entity.

Without acquiescing to the correctness of this rejection, the Applicants have cancelled claim 32 and 41.

The Applicants respectfully submit that this rejection is now moot and may be withdrawn.

Rejection of claims under 35 U.S.C. § 102 (Klaerner)

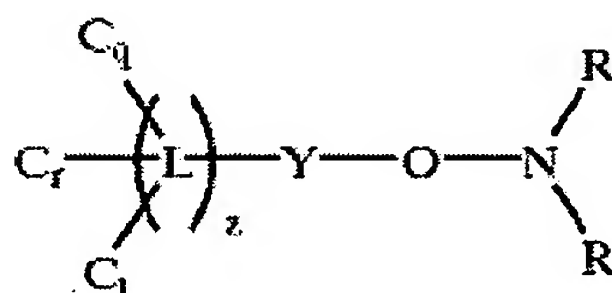
Claims 31-48 are rejected under 35 U.S.C. § 102(e) over Klaerner *et al.* (U.S. Patent Publication 2002/0001845). Specifically, the Office Action asserts that Klaerner *et al.* discloses a process for preparing a solid support that anticipates the subject claims. The Applicants respectfully disagree.

Without acquiescing to the correctness of this rejection, claims 31 and 40 have been amended to recite a “surface reactive hydroxyl, carboxyl, amino or thiol group”. New claims 49-52 recite contacting a surface coating “with a homogenous plurality of vinyl monomers”.

The Applicants respectfully submit that Klaerner fails to disclose a surface coating

having surface reactive hydroxyl, carboxyl, amino or thiol group, and, accordingly, does not disclose the invention recited in claims 31-48. Further, the Applicants respectfully submit that Klaerner fails to disclose contacting a surface coating with a *homogenous* plurality of vinyl monomers, and, accordingly, new claims 49-52 recite a feature that is not disclosed by Klaerner.

A description of Klaerner's initiators (which are regarded by the Examiner to be the same as the surface-reactive sites recited in the rejected claims) is found in paragraphs 73-76 paragraphs 86-87, and figures 2-5 of Klaerner's disclosure. Klaerner's initiators are "free-radical" initiators of polymerization, and, according to paragraph 75, "a surface-bound initiator may be characterized by the following formula:



wherein: C is a functional moiety on the surface of the substrate; L is a linker group capable of bonding to at least one C moiety; q, r, and t, independently, are 0 or 1; z is 0 or, preferably, 1; O is oxygen, N is nitrogen; and, R is a substituent, as further described herein."

In use, such an initiator is cleaved between the Y and O bond to provide a residue that initiates free-radical polymerization of acrylamide monomers into polyacrylamide.

Residue Y, according to Klaerner's paragraph 94, is a residue selected from "substituted alkyl, alkoxy, substituted alkoxy, heteroalkyl, substituted heteroalkyl, aryl, and substituted aryl residues". None of these residues is a hydroxyl, carboxyl, amino or thiol group, and at no point in the remainder of Klaerner's disclosure that Y may be a hydroxyl, carboxyl, amino or thiol group. In fact, since hydroxyl, carboxyl, amino or thiol groups cannot initiate free-radical polymerization, Klaerner's teachings are completely inapposite to the claimed subject matter.

As such, Klaerner fails to teach any of the surface-reactive groups, recited in claims 31 and 40. Accordingly, the Applicants respectfully submit that Klaerner fails to teach an element of the rejected claims, and, accordingly, cannot anticipate the rejected claims.

Further, with respect to claims 49-52, the Applicants respectfully submit that Klaerner fails to disclose a *homogeneous* mixture of vinyl monomers.

The focus of Klaerner's disclosure is on production of acrylamide polymers. In

paragraph 126, Klaerner states that the “Copolymers can also include, for example, one or more of the aforementioned *polyacrylamide*-based repeat units *in combination with* one or more other repeat units.....Examples of other such repeat units include those derived from monomers suitable for forming copolymers such as.....” In other words, Klaerner’s copolymers may contain *a combination of* polyacrylamide monomers *and* non-acrylamide monomers, but may not solely contain non-acrylamide monomers. Presumably Klaerner’s free-radical-based polymerization chemistry limits his polymerization methods to only those that contain acrylamide monomers.

Accordingly, the Applicants respectfully submit that Klaerner fails to teach a method involving a homogeneous mixture of non-acrylamide monomers.

As noted above, claims 49-52 are directed to methods that involve a homogeneous mixture of *vinyl* monomers. Since vinyl is not acrylamide and in view of the foregoing discussion, the Applicants respectfully submit that Klaerner fails to teach this element of the claims. In fact, Klaerner’s free-radical-based polymerization chemistry limits the types of polymer that he can produce, and accordingly, Klaerner’s teachings cannot straightforwardly be adapted into the instant methods.

Accordingly, the Applicants respectfully submit that new claims 49-52, like rejected claims 31-48, are patentable over Klaerner and should be allowed.

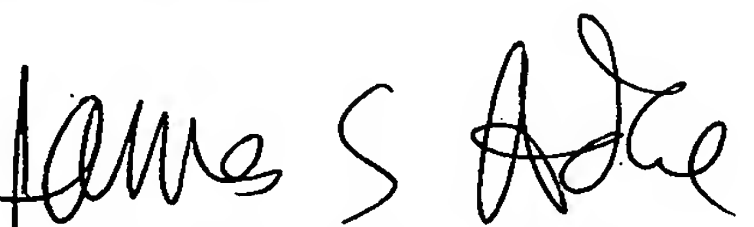
CONCLUSION

The Applicants respectfully submit that all of the claims are in condition for allowance, which action is requested. If the Examiner finds that a telephone conference would expedite the prosecution of this application, please telephone Timothy Joyce at (650) 485 4310.

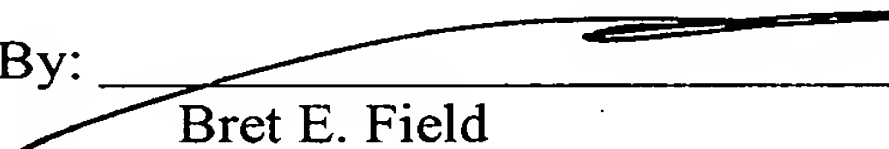
The Commissioner is hereby authorized to charge any fees under 37 C.F.R. §§ 1.16 and 1.17 which may be required by this paper, or to credit any overpayment, to Deposit Account No. 50-1078.

Respectfully submitted,

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